

# Service Manual

Telephone Equipment

## KX-TS10RU-W

*Simplified*

Integrated Telephone System

**White Version**

**Data Port** 

(for Russia )

Please file and use this manual together with the Service Manual for model KX-TS10-W order No. KM49711210C1.  
This Service Manual indicates the main differences between: Original KX-TS10-W and KX-TS10RU-W.

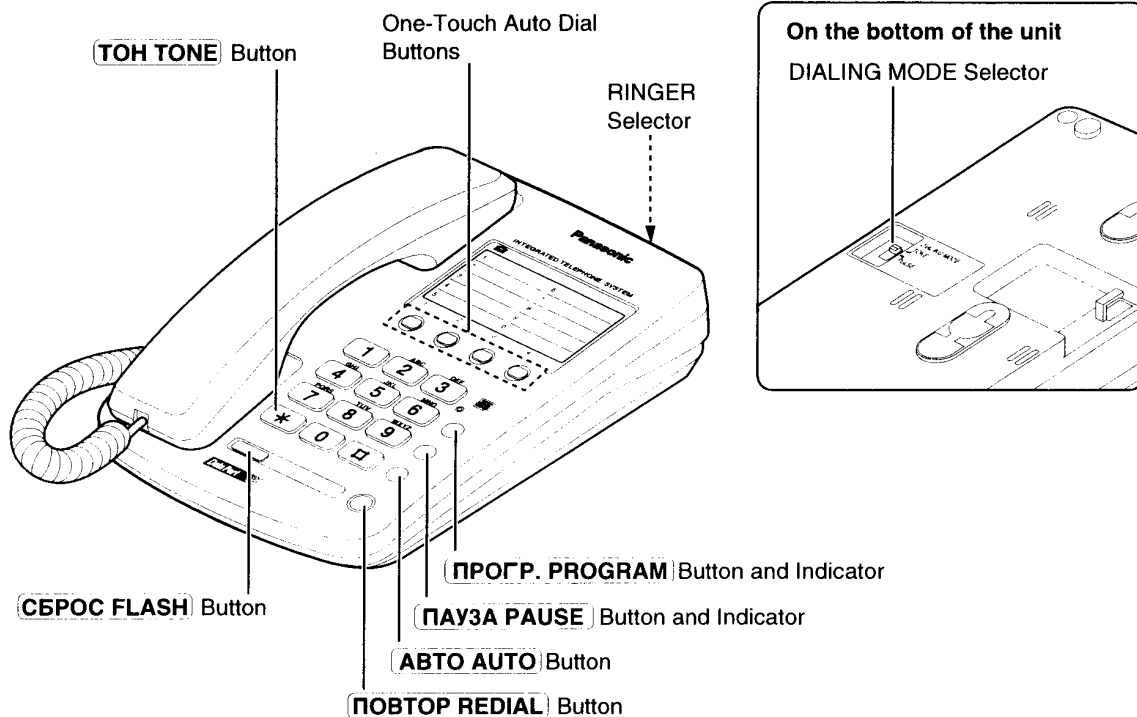
### **WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public.  
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.  
Products powered by electricity should be serviced or repaired only by experienced professional technicians.  
Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

# Panasonic

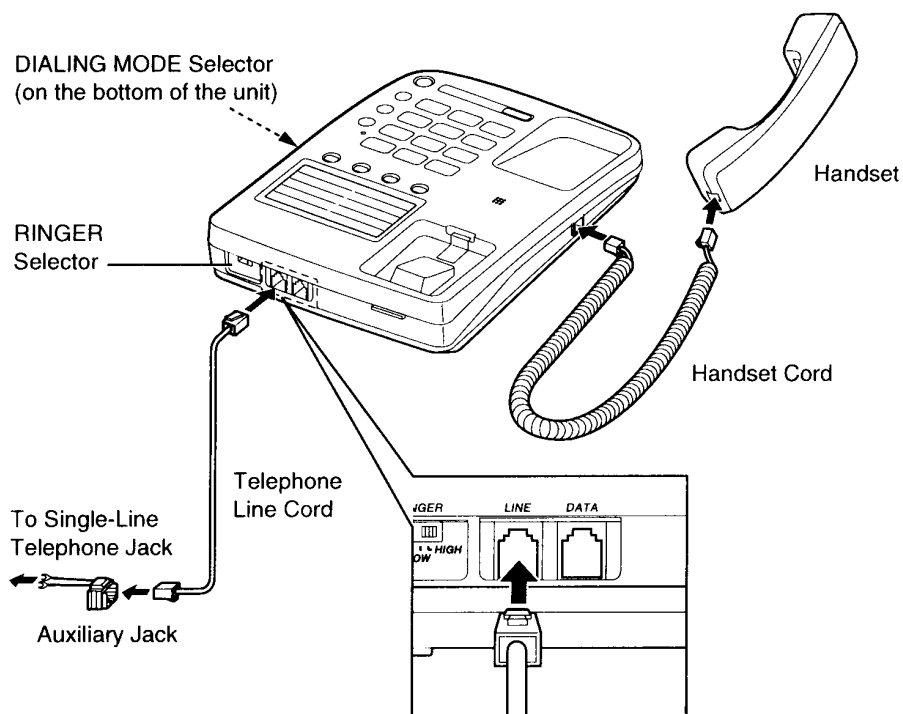
©1999 Kyushu Matsushita Electric Co., Ltd.  
All rights reserved. Unauthorized copying and distribution is a violation of law.

■ CONNECTION [Change from original page 3]



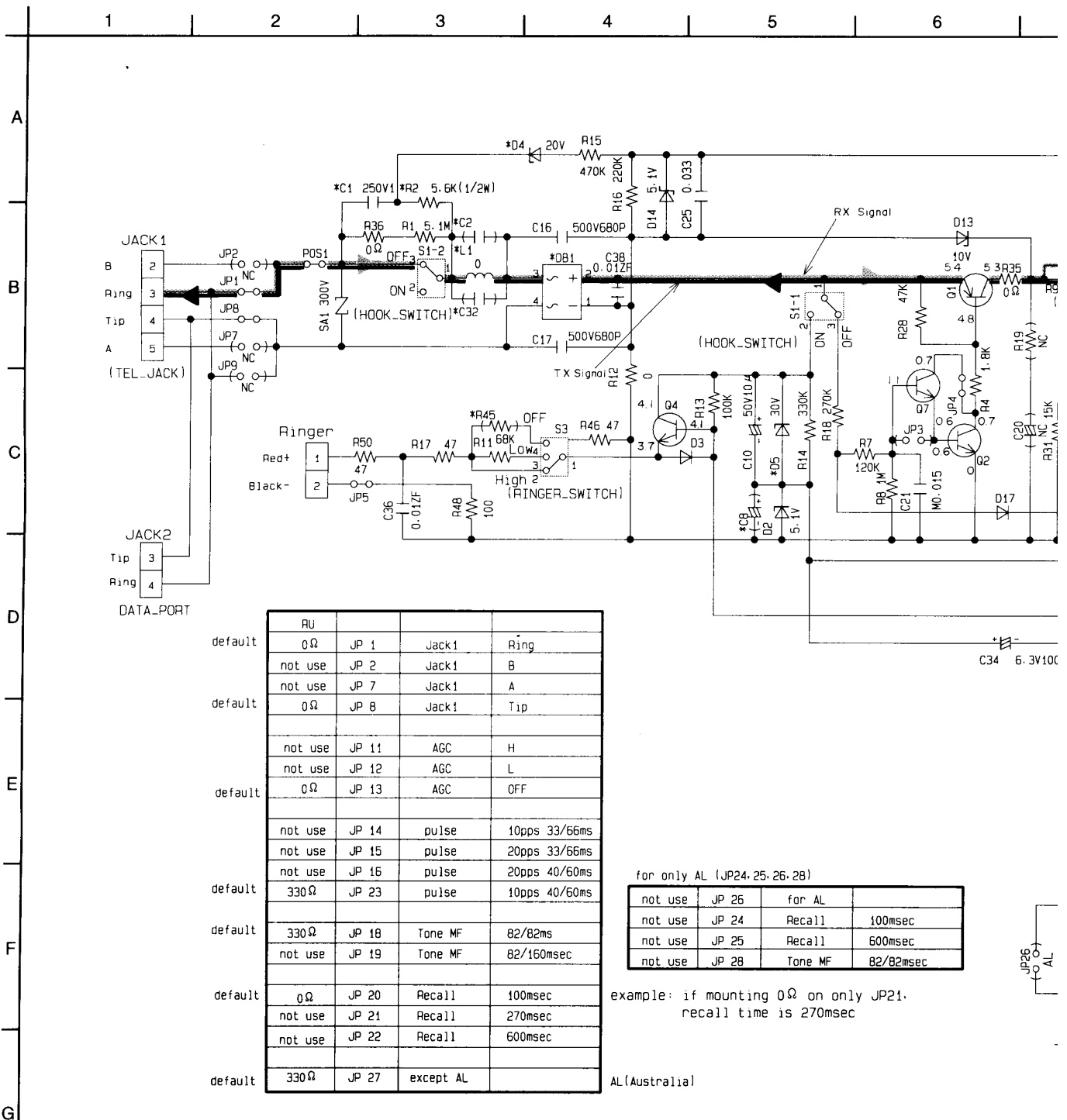
(Model KX-TS10RU-W)

■ CONNECTION [Change from original page 3]



(Model KX-TS10RU-W)

### SCHEMATIC DIAGRAM [Cf



**Notes:**

1. S1: Hook switch in "OFF-HOOK" position.
2. S2: Dialing mode selector switch in "TONE" position.
3. S3: Ringer volume selector switch in "HIGH" position.
4. DC voltage measurements are taken with electronic voltmeter from negative terminal of battery.  
(Add 40 mA to telephone line from the loop simulator.)
5. This schematic diagram may be modified at any time with the development of new technology.

**6. Important Safety Notice:**

The shaded area on this schematic diagram incorporates special features important for protection from fire and electrical shock hazards.

When servicing it is essential that only manufacturer's specified parts be used for the critical components in the shaded areas of the schematic.

1 [Change from original page 13]

7

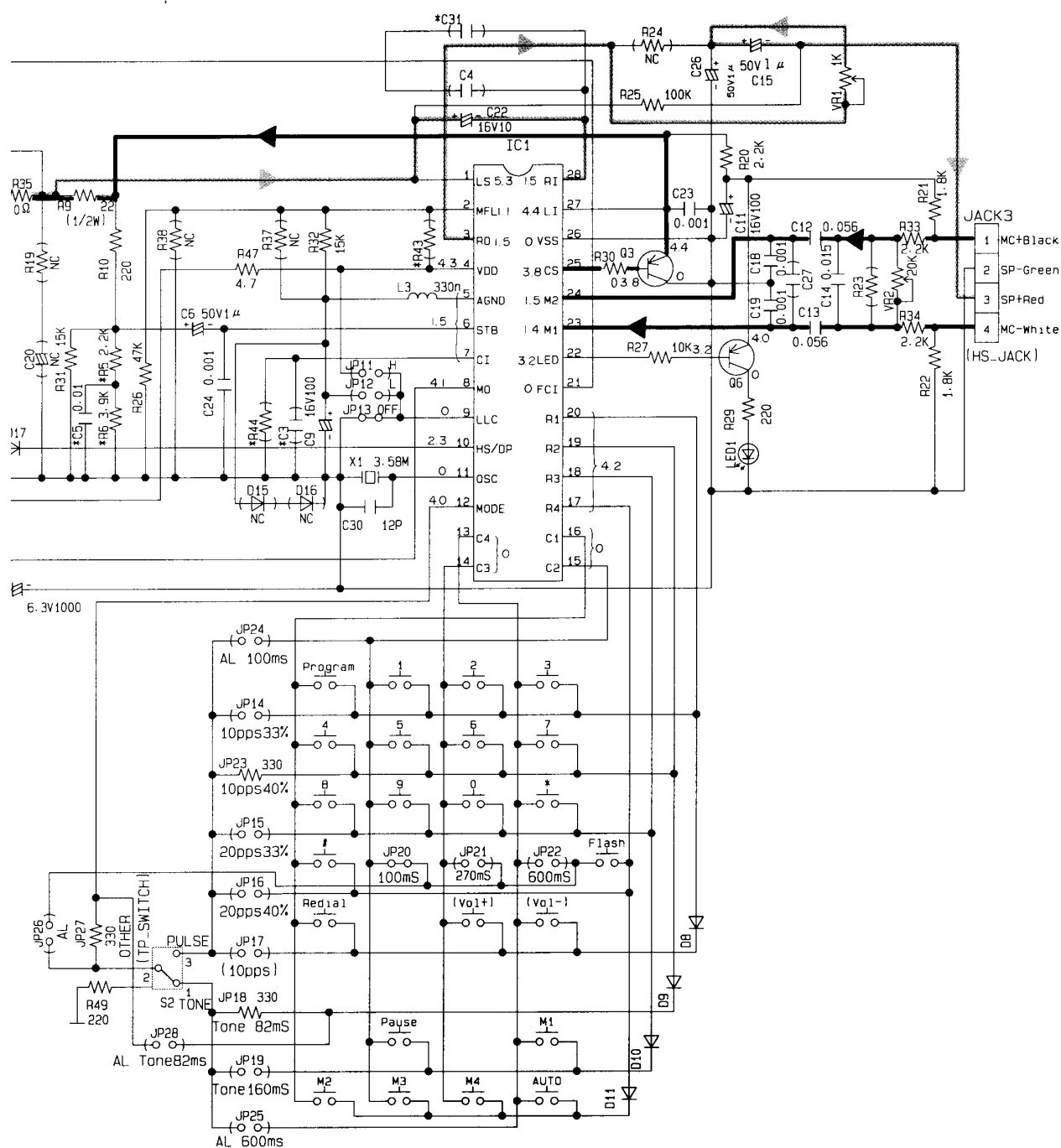
8

9

10

11

12



ates  
I  
s  
the

This replacement parts list is only for the model : KX-TS10RU-W

This r

## REPLACEMENT PARTS LIST

## KX-TS10RU-W

## 1. RTL (Retention Time Limited)

Note: The marking (RTL) indicates that the Retention Time is limited for this item.

After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability depends on the type of assembly and the laws governing parts and product retention. At the end of this period, the assembly will no longer be available.

## 2. Important safety notice

Components identified by the  $\Delta$  mark indicates special characteristics important for safety. When replacing any of these components, only use specified manufacturer's parts.

## 3. The S mark indicates service standard parts and may differ from production parts.

## 4. RESISTORS &amp; CAPACITORS

Unless otherwise specified;

All resistors are in ohms ( $\Omega$ ) K=1000 $\Omega$ , M=1000K $\Omega$

All capacitors are in MICRO FARADS ( $\mu$ F) P= $\mu$ F

\*Type & Wattage of Resistor

Type

ERC:Solid	ERX:Metal Film	PQ4R:Carbon
ERD:Carbon	ERG:Metal Oxide	ERS:Fusible Resistor
PQRD:Carbon	ER0:Metal Film	ERF:Cement Resistor

Wattage

10,16:1/8W	14,25:1/4W	12:1/2W	1:1W	2:2W	3:3W
------------	------------	---------	------	------	------

\*Type & Voltage of Capacitor

Type

ECFD:Semi-Conductor	ECED,ECKD,ECBT,PQCBC : Ceramic
ECQS:Styrol	ECQE,ECQV,ECQG : Polyester
PQCUV:Chip	ECEA,ECSZ : Electrolytic
ECQMS:Mica	ECQP : Polypropylene

Voltage

ECQ Type	ECQG Type	ECSZ Type	Others		
1H: 50V	05: 50V	0F:3.15V	0J :6.3V	1V :35V	
2A:100V	1:100V	1A:10V	1A :10V	50,1H:50V	
2E:250V	2:200V	1V:35V	1C :16V	1J :63V	
2H:500V		0J:6.3V	1E,25:25V	2A :100V	

Ref. No.	Part No.	Part Name & Description	Pcs/Set
CABINET & ELECTRICAL PARTS			
1	PQBH10022Z1	BUTTON, HOOK	1
2	PQBX10291Z1	BUTTON, KEY	1
3	PQBX10295Y1	BUTTON, FLASH, VOLUME, REDIAL	1
4	PQGD10153Z	TEL CARD	1
5	PQGV10033Z	TEL CARD COVER	1
6	PQHR10581Z	LED PLATE	1
7	PQKE10069Z1	HANGER	1
8	PQKM10302P1	UPPER CABINET	1
9	PQXS10067Z	BUTTON, RUBBER	1
10	PQYF10121X1	LOWER CABINET	1
11	PQUS10233Z	SPRING	1
12	PQGT13440Z	NAME PLATE	1

Ref. No.	Part No.	Part Name & Description	Pcs/Set
ACCESSORIES			
A 1	PQJA10075Z	TELEPHONE LINE CORD	1
A 2	PQJA212M	HANDSET CORD	1
A 3	PQQW12046Z	LEAFLET	1
A 4	PQQX12042Z	INSTRUCTION BOOK	1
A 5	PQJJ1TA8Z	TEL PLUG	1
H 1	PQJX2PJAL13Z	HANDSET ASS'Y	1
PACKING MATERIALS			
P 1	PQPK12698Z	GIFT BOX	1
P 2	PQPN10611Z	INNER BOX	1
P 3	PQPP10076Z	PROTECTION COVER (for Unit)	1
P 4	PQPP34Z	PROTECTION COVER (for Handset)	1
MAIN PRINTED CIRCUIT BOARD PARTS			
PCB1	PQWPTS10RUW	MAIN P.C.BOARD ASS'Y (RTL)	1
IC1	PQVIAS2533T	(ICS) IC	1
(TRANSISTORS)			
Q 1	2SA1626	TRANSISTOR(SI)	1
Q 2	2SD662B	TRANSISTOR(SI)	1
Q 3	2SB1322	TRANSISTOR(SI)	1
Q 4	2SC1740S	TRANSISTOR(SI)	1
Q 6	2SA933	TRANSISTOR(SI)	1
Q 7	2SD662B	TRANSISTOR(SI)	1
(DIODES)			
D 2	MA4051	DIODE(SI)	1
D 3	1SS119	DIODE(SI)	1
D 4	MA4200	DIODE(SI)	1
D 5	MA4300	DIODE(SI)	1
D 8	1SS119	DIODE(SI)	1
D 9	1SS119	DIODE(SI)	1
D10	1SS119	DIODE(SI)	1
D11	1SS119	DIODE(SI)	1
D13	MA4100	DIODE(SI)	1
D14	MA4051	DIODE(SI)	1
D17	MA110	DIODE(SI)	1
DB1	PQVD0R5G4B42	DIODE(SI)	1
LED1	PQVDSML210L	LED	1
(COILS)			
L 3	PQLQZMR33K	COIL	1

JACK1  
JACK2  
JACK3

S1  
S2  
S3

E1  
SA1  
VR1  
VR2  
X1

R 1  
R 2  
R 4  
R 5  
R 6  
R 7  
R 8  
R 9

R10  
R11  
R13  
R14  
R15  
R16  
R17  
R18

R20  
R21  
R22  
R25  
R26  
R27  
R28  
R29

R30  
R31  
R32  
R33  
R34

R46

This replacement parts list is only for the model : KX-TS10RU-W

Ref. No.	Part No.	Part Name, Description, & Value	Pcs/Set	Ref. No.	Part No.	Value	Pcs/Set
JACK1	PQJ1TA15Z	(JACKS) JACK, TEL	S 1	R47	PQ4R10XJ4R7	4.7	S 1
JACK2	PQJ1TA15Z	JACK, DATA	S 1	R48	PQ4R10XJ101	100	S 1
JACK3	PQJ1TB2Y	JACK, HANDSET	1	R49	ERDS2TJ221	220	1
				R50	ERDS2TJ470	47	1
		(SWITCHES)		JP4	PQ4R10XJ000	0	S 1
S1	PQSH2B103Z	SWITCH, HOOK	1	JP13	PQ4R10XJ000	0	S 1
S2	PQSS2A103Z	SWITCH, DIALING MODE SELECTOR	1	JP18	PQ4R10XJ331	330	S 1
S3	PQSS3A17W	SWITCH, RINGER SELECTOR	1	JP20	PQ4R10XJ000	0	S 1
				JP23	PQ4R10XJ331	330	S 1
		(OTHERS)		JP27	PQ4R10XJ331	330	S 1
E1	PQEFBPKM34E1	BUZZER	1				
SA1	PQVDDSS301L	VARISTOR	1			(CAPACITORS)	
VR1	EVNDXAA03B13	VARIABLE RESISTOR	1	C 1	ECQE2E105KZ	1	S 1
VR2	EVNDXAA03B24	VARIABLE RESISTOR	1	C 5	PQCUV1H103KB	0.01	1
X1	PQVBKBR3.58M	CRYSTAL OSCILLATOR	1	C 6	ECEA1HKS010	1	S 1
				C 9	ECEA1CK101	100	S 1
		(RESISTORS)		C10	ECEA1HKS100	10	S 1
R 1	ERJ6GEYJ515	5.1M	1	C11	ECEA1CK101	100	S 1
R 2	ERDS1TJ562	5.6K	S 1	C12	PQCUV1H563KB	0.056	1
R 4	PQ4R10XJ182	1.8K	S 1	C13	PQCUV1H563KB	0.056	1
R 5	PQ4R10XJ222	2.2K	S 1	C14	PQCUV1H153KB	0.015	1
R 6	PQ4R10XJ392	3.9K	S 1	C15	ECEA1HKS010	1	S 1
R 7	PQ4R10XJ124	120K	S 1	C16	ECKD2H681KB	680P	S 1
R 8	PQ4R10XJ105	1M	S 1	C17	ECKD2H681KB	680P	S 1
R 9	ERDS1TJ220	22	S 1	C18	PQCUV1H102J	0.001	S 1
R10	PQ4R10XJ221	220	S 1	C19	PQCUV1H102J	0.001	S 1
R11	PQ4R10XJ683	68K	S 1	C21	PQCUV1H153KB	0.015	1
R13	PQ4R10XJ104	100K	S 1	C22	ECEA1CKS100	10	S 1
R14	PQ4R10XJ334	330K	S 1	C23	PQCUV1H102J	0.001	S 1
R15	PQ4R10XJ474	470K	S 1	C24	PQCUV1H102J	0.001	S 1
R16	PQ4R10XJ224	220K	S 1	C25	PQCUV1E333MD	0.033	S 1
R17	PQ4R10XJ470	47	S 1	C26	ECEA1HKS010	1	S 1
R18	PQ4R10XJ274	270K	S 1	C30	PQCUV1H120JC	12P	1
R20	PQ4R10XJ222	2.2K	S 1	C34	ECA0JM102	1000	1
R21	PQ4R10XJ182	1.8K	S 1	C36	PQCUV1H103ZF	0.01	1
R22	PQ4R10XJ182	1.8K	S 1	C38	PQCUV1H103ZF	0.01	1
R25	PQ4R10XJ104	100K	S 1				
R26	PQ4R10XJ473	47K	S 1				
R27	PQ4R10XJ103	10K	S 1				
R28	PQ4R10XJ473	47K	S 1				
R29	PQ4R10XJ221	220	S 1				
R30	PQ4R10XJ000	0	S 1				
R31	PQ4R10XJ153	15K	S 1				
R32	PQ4R10XJ153	15K	S 1				
R33	PQ4R10XJ222	2.2K	S 1				
R34	PQ4R10XJ222	2.2K	S 1				
R46	ERDS2TJ470	47	1				